(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 28 October 2004 (28.10.2004)

(10) International Publication Number WO 2004/092418 A3

(51) International Patent Classification⁷:

C12Q 1/68

(21) International Application Number:

PCT/US2004/012779

(22) International Filing Date: 14 April 2004 (14.04.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/462,962 60/462,965 14 April 2003 (14.04.2003) 14 April 2003 (14.04.2003)

(71) Applicant (for all designated States except US): NUGEN TECHNOLOGIES, INC. [US/US]; 821 Industrial Road, Unit A, San Carlos, CA 94070 (US).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): KURN, Nurith [IL/US]; 2876 Ramona Street, Palo Alto, CA 94306 (US). WANG, Shenglong [CA/US]; 128 West 36th Avenue, San Mateo, CA 94403 (US).
- (74) Agents: BUFFINGER, Nicholas, S. et al.; Morrison & Foerster LLP, 755 Page Mill Road, Palo Alto, CA 94304
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 2 December 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

2004/092418 A3

(54) Title: GLOBAL AMPLIFICATION USING A RANDOMLY PRIMED COMPOSITE PRIMER

(57) Abstract: The invention relates to the field of polynucleotide amplification. More particularly, the invention provides methods, compositions and kits for amplification of (i.e., making multiple copies of) a multiplicity of different polynucleotide template sequences using a randomly primed RNA/DNA composite primer.

International Application No //US2004/012779

			1-01/05200	47 012773				
A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C12Q1/68								
According to International Palent Classification (IPC) or to both national classification and IPC								
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C12Q								
	on searched other than minimum documentation to the extent that su			·				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, PAJ, WPI Data, Sequence Search, CHEM ABS Data								
C. DOCUME	NTS CONSIDERED TO BE RELEVANT							
Category °	Citation of document, with indication, where appropriate, of the rele	vant passages		Relevant to claim No.				
		/						
X Furth	er documents are listed in the continuation of box C.	X Patent family r	nembers are listed i	n annex.				
*T' later document published after the International filing date or priority date and not in conflict with the application but considered to be of particular relevance considered to be of particular relevance. "E' earlier document but published on or after the International filing date "C' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O' document referring to an oral disclosure, use, exhibition or other means "P' document published prior to the international filing date but later than the priority date claimed "T' later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the cited to understand the principle or theory underlying the cited to understand the principle or theory underlying the cited to understand the principle or theory underlying the cited to curie invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is not an inventive step when the document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one or more other such document is combined with one								
Date of the actual completion of the international search Date of mailing of the international search report								
	October 2004	15/10/2	004	·				
Name and m	alling address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2260 HV Rijswfk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Schmitt, C						

International Application No // US2004/012779

		1-57/05/2004/01/79
	etion) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/072772 A (KURN NURITH ; NUGEN TECHNOLOGIES INC (US)) 19 September 2002 (2002-09-19)	1-40, 44-57, 59-75, 77-97, 99-117, 119-139, 141,142
	claims 1,5,12,14,18-21,111,114-134,136-138,158 page 17, line 16 - line 22 page 20, line 3 - line 18 page 26, line 17 - page 30, line 18	
	page 37, line 12 - line 26 page 56, line 18 - page 62, line 12 page 64, line 16 - line 27 page 70, line 2 - line 30 page 76, line 14 - page 77, line 24	
Υ	page 87, line 9 - page 88, line 23	41-43, 58,76, 98,118
Y	WO 02/48402 A (KURN NURITH; NUGEN TECHNOLOGIES INC (US)) 20 June 2002 (2002-06-20) page 117 page 3, line 8 - line 26	41-43, 58,76, 98,118
X	WO 99/23256 A (LUCITO ROBERT ; WIGLER MICHAEL (US); COLD SPRING HARBOR LAB (US)) 14 May 1999 (1999-05-14) page 30, line 14 - line 20	140
A	US 6 124 120 A (LIZARDI PAUL M) 26 September 2000 (2000-09-26) column 3, line 5 - line 28	1-121
		·

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

ternational application No.

PCT/US2004/012779

Box I	No. I	Nucleotide and/or amino acid sequence(s) (Continuation of Item 1.b of the first sheet)	
1.	With	regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the dintion, the international search was carried out on the basis of:	lalmed
	a. .	type of material X a sequence listing table(s) related to the sequence listing	
	b.	format of material X in written format X in computer readable form	
	C.	time of filing/furnishing X contained in the international application as filed filed together with the international application in computer readable form furnished subsequently to this Authority for the purpose of search	
2.		In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has be or turnished, the required statements that the information in the subsequent or additional copies is identical to that application as filed or does not go beyond the application as filed, as appropriate, were furnished.	en filed In the
3.	Addit	itional comments:	٠.

Information on patent family members

International Application No
ICI/US2004/012779

			101700	2001/012//-
Patent document cited in search report	Publication date		Patent family member(s)	Publication date
WO 02072772 A	19-09-2002	CA	2416963 A1	19-09-2002
110 020/2//-	25 05 2002	CN	1473202 T	04-02-2004
	•	· EP	1366197 A2	03-12-2003
		WO	02072772 A2	19-09-2002
		US	2003087251 A1	08-05-2003
WO 0248402 A	20-06-2002	AU	2897402 A	24-06-2002
		CA	2430329 A1	20-06-2002
		EΡ	1427847 A2	16-06-2004
		· WO	0248402 A2	20-06-2002
		US	2003186234 A1	02-10-2003
WO 9923256 A	14-05-1999	· AU	753505 B2	17-10-2002
•	₹7	ΑU	1449799 A	24-05-1999
		CA	2307674 A1	14-05-1999
		EΡ	1032705 A1	06-09-2000
		JP	2001521754 T	13-11-2001
		MO	9923256 A1	14-05-1999
		US	2004137473 A1	15-07-2004
US 6124120 A	26-09-2000	AU	749560 B2	27-06-2002
		ΑU	9791598 A	27-04-1999
		CA -	2308004 A1	15-04-1999
	•	EΡ	1021562 A1	26-07-2000
		JP	2001519172 T	23-10-2001
		WO	9918241 A1	15-04-1999
		US	6280949 B1	28-08-2001
		US	2004063144 A1	01-04-2004
		US	2003143536 A1	31-07-2003